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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/685,667	10/15/2003	Lance E. Lindberg	MSFT-2740/302032.1	5652

23377 7590 05/27/2008
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EXAMINER	
KISS, ERIC B	
ART UNIT	**PAPER NUMBER**
2192	
MAIL DATE	**DELIVERY MODE**
05/27/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	**Application No.** 10/685,667	**Applicant(s)** LINDBERG ET AL.
	Examiner Eric B. Kiss	**Art Unit** 2192

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 February 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7,9,11-18 and 20-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7,9,11-18 and 20-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 27, 2008, has been entered. Claims 1-7, 9, 11-18, and 20-23 are pending.

Response to Amendment

2. The rejection of claims 1-7, 9, 11, 12, and 20-22 under 35 U.S.C. § 101 is withdrawn in view of applicant's amendments.

3. The rejection of claims 1-7, 9, 11-18, and 20-23 under 35 U.S.C. § 112, second paragraph, is withdrawn in view of applicant's amendments.

Response to Arguments

4. Applicant's arguments filed February 27, 2008, have been fully considered but they are not persuasive.

Bahrs teaches a plurality of executors for executing test cases, where the particular executor to be used is specified in the test case. *See*, *e.g.*, *Bahrs et al.*, paragraphs [0043] and [0054] through [0057] (describing configurable execution of test cases specified by the test cases themselves through the extension of an abstract test case class based on configuration data). The configuration data allows a developer to describe a test case for any command type, thus determining an executor that can perform the desired action.

Claim Rejections - 35 USC § 103

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 1-3, 6, 7, 9, 11-18, and 20-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shupps et al. (*Shupps et al.*, US 2002/0188890) in view of Bahrs et al. (*Bahrs et al.*, US 2003/0097650).

Claim 1

Shupps et al. teach a system (see at least FIG.1 & associated text) for testing software (see at least *testing code, application* paragraph [0002]) comprising:

a processor operatively coupled [to] a computer readable storage medium (see, e.g., paragraph [0068]);

- the computer readable storage medium including instructions for a plurality of executors, an executor of the plurality operable to instantiate a program, wherein the program includes instructions for performing at least one action (an executor (see at least *client computer 12, server computer 16* FIG.1 & associated text; *computer-executable instructions, HTML, scripting code* paragraph [0069]) for executing (see at least *client computer 12, log file, log entries, transactions* paragraphs [0133]-[0137]; [0143]; *822* FIG.8 & associated text; *922* FIG.9 & associated text) at least one action (see at least *test script, action* paragraphs [0030]-[0036]; *transaction information* paragraphs [0115]-[0121]) the at least one action specified in an XML document (see at least *computer file, document,* *XML* paragraph [0030]; *rendered code, XML, scripting* paragraph [0074]; *files, XML* paragraph [0082]; *DOM, XML documents, components, application* paragraph [0087]; *testing, components* paragraph [0100]; *transaction information, computer file, document* paragraph [0121])),

- the computer readable storage medium further including computer readable instructions for a dispatcher for instantiating the executor to execute the at least one action (see at least *822* FIG.8 & associated text).

Schupps et al. fails to expressly teach the XML document comprising at least one test case, the XML document specifying the executor for executing the at least one action, the dispatcher configured to identify a specific action to be taken from the test case related to testing the test program, the dispatcher further configured to determine which executor of the plurality of executors is operable to perform the specific action, and the dispatcher further configured to call the specific executor and direct the specific executor perform the specific action. However, *Bahrs et al.* teach such an XML document containing a test case and specifying an executor (test harness). See, e.g., *Bahrs et al.*, paragraphs [0048] and [0064]; and the example configuration file (XML) listed on pp. 6-7. Bahrs further teaches a plurality of executors for executing test cases, where the particular executor to be used is specified in the test case, thus determining an operable executor and directing its action. *See*, *e.g.*, *Bahrs et al.*, paragraphs [0043] and [0054] through [0057] (describing configurable execution of test cases specified by the test cases themselves through the extension of an abstract test case class based on configuration data). Therefore, it would have been obvious to one of ordinary skill in the computer art at the time the invention was made to modify the system of *Schupps et* *al.* to include such an XML document and dispatcher arrangement. One would be motivated to do so to provide an efficient means for organizing and reusing test cases by changing data object configurations necessary for the test case execution (*Bahrs et al.*, paragraph [0065]).

Both Schupps and Bahrs teach writing errors to a log file (*See*, *e.g, Schupps et al.* at paragraphs [0037] and [0073] through [0075]; *Bahrs et al.* at paragraphs [0005] and [0036]), and thus, such a step would have been likewise obvious.

Claim 2

The rejection of base claim 1 is incorporated. *Shupps et al.* further teach a logger for logging information associated with the execution of the at least one action (see at least *reporting mechanism* paragraph [0036]).

Claim 3

The rejection of base claim 2 is incorporated. *Shupps et al.* further teach wherein the logger logs trace statements (see at least *pass/fail statistics* paragraph [0037]).

Claim 6

The rejection of base claim 2 is incorporated. *Shupps et al.* further teach wherein the logger logs errors (see at least *identification of any errors encountered, results, reports* paragraph [0037]).

Claim 7

The rejection of base claim 1 is incorporated. *Shupps et al.* further teach wherein the driver receives input comprising a level of logging to be performed (see at least *document validation, component validation* paragraphs [0147]-[0153]; *1112, 1142* FIG.11 & associated text).

Claim 9

The rejection of base claim 1 is incorporated. *Shupps et al.* further teach wherein the XML document specifies at least one action to be performed to initialize the software system (see at least *810* FIG.8 & associated text; *910* FIG.9 & associated text; *client computer 12, log file, log entries, transactions* paragraphs [0133]-[0137]; [0143]).

Claim 11-

The rejection of base claim 10 is incorporated. *Shupps et al.* further teach wherein the XML document specifies at least one expected result of performing the at least one action (see at least *expected result, each action* paragraph [0034]; *expected results, transaction definition* paragraphs [0145]-[0146]).

Claim 12

The rejection of base claim 1 is incorporated. *Shupps et al.* further teach wherein the XML document specifies at least one action to restore the software to a testable state (see at least *transaction definition, version identifier, restore transaction definitions, rollback* paragraph [0166]; [0179]).

Claim 13

Shupps et al. teach a method of testing software (see at least *testing code, application* paragraph [0002]) comprising:

- receiving, by a software tester instantiated by a computer system, a test file, where the test file includes at least one element selected from a group of elements consisting of a first time initialization element, a before each run initialization element, a run once initialization element, an after each iteration element, and a final cleanup element, each element in the test file including an action related to testing a specific software program and each element in the test file is associated with a scheduling priority level (see at least *test script, action* paragraphs [0030]-[0036]; *transaction information* paragraphs [0115]-[0121]);
- selecting, for each element in the test file, an executor from a plurality of executors capable of performing the action thereby associating each action with an executor (see at least *expected result, each action* paragraph [0034]; *expected results, transaction definition* paragraphs [0145]-[0146]), the action specifiable in an XML test case (see at least *computer file, document, XML* paragraph [0030]; *rendered code, XML, scripting* paragraph [0074]; *files, XML* paragraph [0082]; *DOM, XML documents, components, application* paragraph [0087]; *testing, components* paragraph [0100]; *transaction information, computer file, document* paragraph [0121]);
- scheduling, by the software tester, executing time for each element in the test file in accordance with each element's scheduling priority level (see at least *test*

script, action paragraphs [0030]-[0036]; *transaction information* paragraphs [0115]-[0121]);

- directing, by the software tester in accordance with the scheduled execution time of each element, each selected executor to perform their associated action (see at least *test script, action* paragraphs [0030]-[0036]; *transaction information* paragraphs [0115]-[0121]); and
- executing each action (see at least *822* FIG.8 & associated text; *922* FIG.9 & associated text; *client computer 12, log file, log entries, transactions* paragraphs [0133]-[0137]; [0143]).

Schupps et al. fails to expressly teach the XML document comprising at least one test case, and the XML document specifying the executor for executing the at least one action. However, *Bahrs et al.* teach such an XML document containing a test case and specifying an executor (test harness). See, e.g., *Bahrs et al.*, paragraphs [0048] and [0064]; and the example configuration file (XML) listed on pp. 6-7. Bahrs further teaches a plurality of executors for executing test cases, where the particular executor to be used is specified in the test case. *See*, *e.g.*, *Bahrs et al.*, paragraphs [0043] and [0054] through [0057] (describing configurable execution of test cases specified by the test cases themselves through the extension of an abstract test case class based on configuration data). Therefore, it would have been obvious to one of ordinary skill in the computer art at the time the invention was made to modify the system of *Schupps et al.* to include such an XML document. One would be motivated to do so to provide an efficient means for organizing and reusing test cases by changing data object configurations necessary for the test case execution (*Bahrs et al.*, paragraph [0065]).

Both Schupps and Bahrs teach writing errors to a log file (*See*, *e.g, Schupps et al.* at paragraphs [0037] and [0073] through [0075]; *Bahrs et al.* at paragraphs [0005] and [0036]), and thus, such a step would have been likewise obvious.

Claim 14

The rejection of base claim 13 is incorporated. *Shupps et al.* further teach wherein the action comprises initializing a global testing environment (see at least *Globally Unique Identifier* paragraph [0103]; FIG.5 & associated text).

Claim 15

The rejection of base claim 13 is incorporated. *Shupps et al.* further teach wherein the action comprises initializing a testing environment for a single iteration of the test case (see at least *802-826* FIG.8 & associated text).

Claim 16

The rejection of base claim 13 is incorporated. *Shupps et al.* further teach wherein the action comprises a test operation (see at least *test script, action* paragraphs [0030]-[0036]; *transaction information* paragraphs [0115]-[0121]).

Claim 17

The rejection of base claim 13 is incorporated. *Shupps et al.* further teach wherein the action comprises validating the result of the test operation (see at least *transaction* *validation, actual results, transaction execution, expected results, transaction definition* paragraphs [0145]-[0146]).

Claim 18

The rejection of base claim 13 is incorporated. *Shupps et al.* further teach wherein the action comprises restoring a testing environment to a testable state (see at least *transaction definition, version identifier, restore transaction definitions, rollback* paragraph [0166]; [0179]).

Claim 20

Shupps et al. further teach wherein the test case is a first test case and the first test case is copied and modified to generate a second test case (see at least *modify the transaction definitions* paragraph [0144]; *39* FIG.3 & associated text; *altered definition, new transaction definition, changes* paragraph [0165]).

Claim 21

The rejection of base claim 20 is incorporated. *Shupps et al.* further teach wherein a test group is generated by combining the first and second test cases into a test group (see at least *reusable definitions, new definitions* paragraph [0175]).

Claim 22

The rejection of base claim 21 is incorporated. *Shupps et al.* further teach wherein a second test group is generated by combining the test group with a third test case to generating a second test group (see at least *reusable definitions, new definitions* paragraph [0175]).

Claim 23

Shupps et al. teach a computer-readable medium (see at least *ROM 122, 162, RAM 124, 164* FIG.1 & associated text) including computer-executable instructions (see at least *software code* paragraph [0068]) for:

- receiving, by a software tester instantiated by a computer system, a test file, where the test file includes at least one element selected from a group of elements consisting of a first time initialization element, a before each run initialization element, a run once initialization element, an after each iteration element, and a final cleanup element, each element in the test file including an action related to testing a specific software program and each element in the test file is associated with a scheduling priority level (see at least *test script, action* paragraphs [0030]-[0036]; *transaction information* paragraphs [0115]-[0121]);
- selecting, for each element in the test file, an executor from a plurality of executors capable of performing the action thereby associating each action with an executor (see at least *expected result, each action* paragraph [0034]; *expected results, transaction definition* paragraphs [0145]-[0146]), the action specifiable in an XML test case (see at least *computer file, document, XML* paragraph [0030]; *rendered code, XML, scripting* paragraph [0074]; *files, XML* paragraph [0082]; *DOM, XML documents, components, application* paragraph [0087];

testing, components paragraph [0100]; *transaction information, computer file, document* paragraph [0121]);

- scheduling, by the software tester, executing time for each element in the test file in accordance with each element's scheduling priority level (see at least *test script, action* paragraphs [0030]-[0036]; *transaction information* paragraphs [0115]-[0121]);
- directing, by the software tester in accordance with the scheduled execution time of each element, each selected executor to perform their associated action (see at least *test script, action* paragraphs [0030]-[0036]; *transaction information* paragraphs [0115]-[0121]); and
- executing each action (see at least *822* FIG.8 & associated text; *922* FIG.9 & associated text; *client computer 12, log file, log entries, transactions* paragraphs [0133]-[0137]; [0143]).

Schupps et al. fails to expressly teach the XML document comprising at least one test case, and the XML document specifying the executor for executing the at least one action. However, *Bahrs et al.* teach such an XML document containing a test case and specifying an executor (test harness). See, e.g., *Bahrs et al.*, paragraphs [0048] and [0064]; and the example configuration file (XML) listed on pp. 6-7. Bahrs further teaches a plurality of executors for executing test cases, where the particular executor to be used is specified in the test case. *See, e.g., Bahrs et al.*, paragraphs [0043] and [0054] through [0057] (describing configurable execution of test cases specified by the test cases themselves through the extension of an abstract test case class based on configuration data). Therefore, it would have been obvious to one of ordinary skill in the computer art at the time the invention was made to modify the system of *Schupps et al.* to include such an XML document. One would be motivated to do so to provide an efficient means for organizing and reusing test cases by changing data object configurations necessary for the test case execution (*Bahrs et al.*, paragraph [0065]). Both Schupps and Bahrs teach writing errors to a log file (*See*, *e.g, Schupps et al.* at paragraphs [0037] and [0073] through [0075]; *Bahrs et al.* at paragraphs [0005] and [0036]), and thus, such a step would have been likewise obvious.

7. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Shupps et al.* in view of Bahrs et al. (*Bahrs et al.*, US 2003/0097650) and Ogawa et al. (*Ogawa et al.*, US 5608874).

Claim 4

The rejection of base claim 2 is incorporated. *Shupps et al.* do not expressly disclose wherein the logger logs exceptions. However, *Ogawa et al.* disclose a system for testing software (see at least *error checking, validation* Abstract) wherein a logger (see at least *PostProcessor 601* FIG.9 & associated text) logs exceptions (see at least *Exception Report* col.4:52-53; *Warning/Error Report 627* FIG.9 & associated text). *Shupps et al.* and *Ogawa et al.* are analogous art because they are both directed to testing software. It would have been obvious to one of ordinary skill in the pertinent art at the time the invention was made to incorporate the teaching of *Ogawa et al.* into that of *Shupps et al.* for the inclusion of logging exceptions, and warnings. And the motivation for doing so would have been to facilitate data analysis performed by the software testers and further assist the system in providing appropriate solutions and suggested remedies in accordance with the logged exceptions and warnings (see *Ogawa et al.* col.1:55-col.2:10; col.23:23-35).

Claim 5

The rejection of base claim 2 is incorporated. *Ogawa et al.* further teach wherein the logger logs warnings (see at least *Exception Report, warnings* col.4:52-53; *Test Result Report, warnings* col.6:49-52; *Warning/Error Report* col.23:23-35; *627* FIG.9 & associated text). It would have been obvious to one of ordinary skill in the pertinent art at the time the invention was made to incorporate the teaching of *Ogawa et al.* into that of *Shupps et al.* for the inclusion of logging warnings. And the motivation for doing so would have been the same as has been cited in claim 4.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Eric B. Kiss whose telephone number is (571) 272-3699. The Examiner can normally be reached on Tue. - Fri., 7:00 am - 4:30 pm. The Examiner can also be reached on alternate Mondays.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Tuan Dam, can be reached on (571) 272-3695. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Eric B. Kiss/
Eric B. Kiss
Primary Examiner, Art Unit 2192